



Biomass and Alternative Methane Fuels Super ESPC

Financing and Expertise Available to Federal Agencies Worldwide

Introduction

FEMP is making the energy- and cost-saving benefits of Biomass and Alternative Methane Fuels (BAMF) accessible to Federal facilities through the Super Energy Savings Performance Contract (ESPC) mechanism, which enables agencies to reduce their energy costs without using congressional appropriations for capitol improvements. Agencies can use the Super ESPCs to finance energy-efficiency improvements through contracts with pre-qualified energy service companies (ESCOs) without having to start the procurement process from scratch.

DOE-FEMP awarded BAMF Super ESPCs through a competitive solicitation to five ESCOs:

- Constellation Energy Source, Baltimore, MD
- DTE Biomass Energy, Inc., Ann Arbor, MI
- Energy Systems Group, Evansville, IN
- Exelon Services Federal Group, Knoxville, TN
- Trigen Development Corporation, Baltimore, MD

Working with FEMP, these companies will develop, finance, and implement projects that guarantee energy-related cost savings by using biomass and alternative methane fuels. The ESCO receives fixed payments over the contract term from the savings generated by the project. Agencies can use these contracts for U.S. federal sites anywhere in the world.

Since 1988, more than \$800 million in private-sector investment has been leveraged through ESPCs to improve Federal facilities and help meet energy, water, and emissions-reduction goals. To learn more about how Super ESPCs work, go to FEMP's web site: <http://www.eren.doe.gov/femp/financing/escp.html>.



Wastewater treatment digester gas can yield methane fuel

BAMF Supports National Energy and Security Goals

The BAMF Super ESPC supports the goals of Executive Order 13123, which requires Federal agencies to reduce energy use in federal buildings by 35% from 1985 levels by 2010 and to use the equivalent of 2.5% of facility electricity use from renewable energy sources by 2005 (biomass is a renewable resource). In addition, Executive Order 13134 seeks to stimulate the creation and early adoption of technologies needed to make bioenergy cost-competitive in large markets. This ESPC also supports the National Energy Policy by enabling agencies to:

- Modernize energy infrastructure,
- Increase energy supplies,
- Accelerate the protection and improvement of the environment,
- Increase U.S. energy security.



Agricultural residues are a good source of biomass for the BAMF Super ESPC

BAMF Applications

Biomass and alternative methane fuels can be used in applications such as steam boilers, hot water heaters, engine generation sets, and gas turbines. Such fuels are used in many combined cooling, heating, and power (CHP) systems.

Biomass fuels include any organic matter that is available on a renewable or recurring basis (excluding old-growth timber), such as dedicated energy crops and trees, agricultural food and feed crop residues, aquatic plants, wood and wood residues, animal

Program Overview

U.S. Department of Energy

Office of Energy Efficiency and Renewable Energy



wastes, and other waste materials. Alternative methane fuels include landfill methane, wastewater treatment digester gas, and coalbed methane.

The biomass or alternative methane fuel resource may be owned by the Federal facility, the ESCO, or a third party, and may require transport to the end-use equipment, which must be located on Federal property. All BAMF Super ESPC projects are also expected to include more traditional conservation measures, such as retrofits to lighting, motors, and HVAC systems.

FEMP Assistance

FEMP, with the support of partners at the DOE National Laboratories and DOE Regional Offices, offers many services and resources to help Federal agencies implement their energy projects, whether funded through ESPCs, utility energy service contracts, or appropriations. The Philadelphia Regional Office and the National Energy Technology Laboratory (NETL) coordinate contracting and technical assistance for BAMF projects.

FEMP's Regional Office representatives help agencies:

- Determine whether a Super ESPC project is feasible at a particular site,
- Explain performance contracting to site staff and management,
- Accelerate formation of an acquisition team, and
- Partner with an ESCO

Experienced FEMP project facilitators can be assigned at the agency's request to guide the acquisition team through the entire process of developing, awarding, and verifying savings from a BAMF project. Project facilitators can:

- Review price and technical proposals, at a particular site,
- Draft requests for proposals,
- Consult on all aspects of the project, including contractual, financial, engineering, and technical issues.

To get started, contact the FEMP representative at the DOE Philadelphia Regional Office listed below.

For More Information

Visit the FEMP web site at www.eren.doe.gov/femp/financing/escp/biomass.html.

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Landfill gas is an example of alternative methane fuels

FEMP Help Desk:
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